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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/052,203	01/16/2002	Ken Ohmura	56232.16 [4989]	8680

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EXAMINER

RODEE, CHRISTOPHER D

ART UNIT PAPER NUMBER

1756

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/052,203

Applicant(s)

OHMURA ET AL.

Examiner

Christopher D RoDe

Art Unit

1756

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 and 12-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4, 10 and 15-20 is/are allowed.
- 6) ☒ Claim(s) 5-9 and 12-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

New art has been discovered which is applicable to certain claims in the instant application. New grounds of rejection are applied based on this art.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akai *et al.* in US Patent Application Publication 2002/0012863 in view of JP 11-338192 further in view of Kohyama *et al.* in US Patent Application Publication 2002/0037469.

Akai and the JP document were described above. The references are combined for the reasons given in the last Office action (see pages 2 and 3). Akai and the JP document do not disclose the ratio of toner particles without corners, the number variation coefficient in the toner particles' size distribution, the shape factor of the toner, or the histogram characteristics claimed. However, Akai forms that toner of that invention by an aggregation process where the primary particles have a wax encapsulated therein. These primary particles aggregate to form the toner of the reference's invention. One exemplified wax is behenyl behenate (Example 1).

Kohyama discloses a toner formed by aggregation of a resin particle having a resin and a release agent and a colorant particle (Abstract; Examples). Useful release agents include those of the formula $R^1-(OCO-R^2)_n$, where each R is a hydrocarbon having from 1 to 40 carbon atoms, preferably 18 to 26 carbon atoms, and "n" is 1 to 4 (¶¶ [0126] - [0131]). This formula

Art Unit: 1756

includes behenyl behenate when each R hydrocarbon in an alkyl group having 21 carbon atoms.

Kohyama teaches that toners effectively have particles with not less than 65% in number has a shape coefficient of from 1.0 to 1.6, preferably not less than 65% in number has a shape coefficient of from 1.2 to 1.6 (¶¶ [0042], [0043], & [0058]) and a number variation coefficient of the number particle size distribution of not more than 27% (¶ [0056]). Kohyama also teaches that the toner particles not less than 50% in number are particles having no corner (¶ [0044]) and that a sum M is at least 70 percent, where the sum M is obtained by adding relative frequency m1 of toner particles, included in the most frequent class, to relative frequency m2 of toner particles included in the second frequent class in a histogram showing the particle size distribution, which is drawn in such a manner that natural logarithm $\ln D$ is used as an abscissa, wherein D (in μm) represents the particle size of a toner particle, while being divided into a plurality of classes at intervals of 0.23, and the number of particles is used as an ordinate (¶ [0050]).

The Kohyama reference teaches that toner particles having these characteristics have a small difference in fixing ability and antioffset ability (¶ [0070]), as well as having excellent developing ability and fine line reproducibility (¶ [0076]). These particles also give less contamination of the carrier and development sleeve (¶ [0076]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the toner of Akai with the characteristics specified in Kohyama, noted above, because these characteristics are shown to give consistent fixing and antioffset characteristics between toner particles as well as excellent development characteristics and reduced contamination of development carrier and sleeve. Further, because the toners are

Art Unit: 1756

formed by an aggregation process there is a high probability that the artisan will have success in forming the toner of Akai with the characteristics noted for Kohyama.

Applicant cannot rely upon the foreign priority papers to overcome this rejection because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akai *et al.* in US Patent Application Publication 2002/0012863 in view of JP 11-338192 further in view of either Itami *et al.* in US Patent Application Publication 2001/0031412 or JP 2001-255685.

Akai and the JP '192 reference were discussed above. The references are combined for the reasons given in the last Office action (see pages 2 and 3). Akai and the JP document do not disclose the ratio of toner particles without comers, the number variation coefficient in the toner particles' size distribution, the shape factor of the toner, or the histogram characteristics claimed.

The supporting Itami and JP '685 documents are from the same patent family (i.e., derived from the same priority document). Because of this common lineage, Itami will be discussed but the remarks are seen as being equally applicable to the JP document.

Itami teaches that toners effectively have particles with not less than 65% in number has a shape coefficient of from 1.0 to 1.6, preferably not less than 65% in number has a shape coefficient of from 1.2 to 1.6 (¶¶ [0169], [0170], & [0171]) and a number variation coefficient of the number particle size distribution of not more than 27% (¶ [0185]) for a toner formed by a fusion (i.e., aggregation) process (¶ [0177]). Further, Itami states that in a number based histogram, in which natural logarithm $\ln D$ is taken as the abscissa and said abscissa is divided into a plurality of classes at an interval of 0.23, a toner is preferred, which exhibits at least 70

Art Unit: 1756

percent of the sum (M) of the relative frequency (m1) of toner particles included in the highest frequency class, and the relative frequency (m2) of toner particles included in the second highest frequency class (§ [0190]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to produce the toner with the above noted shape coefficient because this value is disclosed by the reference as giving more uniform triboelectrical properties on the developer conveying member resulting in no accumulation of excessively charged toner particles, and the toner particles are more readily replaced from the surface of said developer conveying member to minimize the generation of problems (§ [0170]). The noted histogram would have been obvious to produce because Itami teaches that the dispersion of the resultant toner particle size distribution narrows and it is possible to securely minimize the generation of selective development (§ [0191]).

Applicant cannot rely upon the foreign priority papers to overcome this rejection with respect to Itami because a translation of said papers has not been made of record in accordance with 37 CFR 1.55. See MPEP § 201.15.

Double Patenting

Claims 5 through 9 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 11-15 of copending Application No. 10/099081. Although the conflicting claims are not identical, they are not patentably distinct from each other because the specific characteristics of the toner particles in claims 11-15 fall within the scope of the instant claims. For example, the toner of claim 11 has a resin, colorant, and a crystalline substance, has a domain-matrix structure, and has Voronoi polygon characteristics within the scope of the instant claims. Because the copending claims

Art Unit: 1756

define toners falling within the scope of the instant claims, they anticipate the instant claims. A double patenting rejection is proper per *In re Goodman*, 29 USPQ2d 2010.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The terminal disclaimer filed on 25 August 2003 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent application 10/201403 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Allowable Subject Matter

Claims 1-4, 10, and 15-20 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher D RoDee whose telephone number is 703 308-2465. The examiner can normally be reached on most weekdays from 6 to 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Huff can be reached on 703 308-2464. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

cdr
7 October 2003


CHRISTOPHER RODEE
PRIMARY EXAMINER